CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory
An ISO 9001:2015 Certified Company
NABL - Accredited Laboratory as per ISO / IEC-17025 : 2017

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/CR/W.No.14/GSB-5/GR/2020-21 09.11.2020

TEST REPORT ON GRADATION FOR GRANULAR SUB BASE

* Customer	:	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Sri.C.Rajanna,** Kannasawadi Village, Madhure (H), Doddaballapura (T), Bangalore - 562103.
* Name of work	:	Improvements and Asphalting to road at Ramaiah and Soundarya Layout surrounding in Bagalagunte Ward No.14, BBMP, Bangalore.
* Reference	:	EE/DD/W.O/127/2020-21 Dated : 05.11.2020
* Sample ID	:	GSB-(Grading V)
Test Method as per	:	IS - 2720 (Part 4) : 1985 (RA-2015), MORTH 400-1
Date of Testing	:	09.11.2020
Report Issue Date	:	09.11.2020

Oven Dry Wt (gm) : 5000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specified Limits
75.0	0	0	0.00	100	100
53.0	310	310	6.20	93.80	80-100
26.50	1385	1695	33.90	66.10	55-90
9.50	945	2640	52.80	47.20	35-65
4.75	955	3595	71.90	28.10	25-50
2.36	850	4445	88.90	11.10	10-20
0.850	335	4780	95.60	4.40	2-10
0.425	130	4910	98.20	1.80	0-5
PAN	90				
Total	5000				

Civil-Tech Consultants & Engineers Bangalore

* Information is furnished by the Customer/Representative

AE-14 ಬಿ.ಬ.ಪ.ಅ. ಬಾಗಲಗುಂಟೆ

Remarks: Satisfies MORTH Specifications as per Table 400-1, Grading V.

Note:

⇨The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇨The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇨Any Query regarding the report must be reported within 30 days from the date of testing.

****

M/s. Civil-Tech Consultants & Engineers

Authorised Signatory

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagara, Bangalore-79.
Tele fax : 23223227, Cell : 93428 39190, Website : www.civiltechconsultants.com
e-mail : vishwanath.ia@civiltechconsultants.com | info@civiltechconsultants.com

Scanned by CamScanner

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory
An ISO 9001:2015 Certified Company
NABL - Accredited Laboratory as per ISO / IEC-17025 : 2017

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/CR/W.No.14/GSB-5/AL/2020-21 Date 09.11.2020

TEST REPORT ON ATTERBERG LIMITS TEST FOR GRANULAR SUB BASE

* Customer	:	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Sri.C.Rajanna,** Kannasawadi Village, Madhure (H), Doddaballapura (T), Bangalore - 562103.
* Name of work	:	Improvements and Asphalting to road at Ramaiah and Soundarya Layout surrounding in Bagalagunte Ward No.14, BBMP, Bangalore.
* Reference	:	EE/DD/W.O/127/2020-21 Dated : 05.11.2020
* Sample ID	:	GSB-(Grading V)
Test Method as per	:	IS - 2720 (Part - 5) : 1985 (RA-2015), MORTH Table : 400-1
Date of Testing	:	09.11.2020
Report Issue Date	:	09.11.2020

Tests on filler screen materials (As per Table : 400-13)

Sl. No.	Particulars	Test Results	Requirement as per MORTH
1	Liquid Limit, %	22.50	25.0% Maximum.
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

* Information is furnished by the Customer/Representative

Remarks: Satisfies MORTH Specifications as per Table 400-1, GSB-(Grading V)

Note:

⇒The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒Any Query regarding the report must be reported within 30 days from the date of testing.

****

M/s. Civil-Tech Consultants & Engineers

Authorised Signatory

ಸ. ಕಿ. ಪ್ರಾ. ಆ.
ಬಾಗಲಗುಂಟೆ

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagara, Bangalore-79.
Tele fax : 23223227, Cell : 93428 39190, Website : www.civiltechconsultants.com
e-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

Scanned by CamScanner

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory
An ISO 9001:2015 Certified Company
NABL - Accredited Laboratory as per ISO / IEC-17025 : 2017

Job No.: CTCE/BBMP/CR/W.No.14/WMM/Shape.T/2020-21

13.11.2020

TEST REPORT ON FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

* Customer	:	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Sri.C.Rajanna,** Kannasawadi Village, Madhure (H), Doddaballapura (T), Bangalore - 562103.
* Name of Work	:	Improvements and Asphalting to road at Ramaiah and Soundarya Layout surrounding in Bagalagunte Ward No.14, BBMP, Bangalore.
* Reference	:	EE/DD/W.O/127/2020-21 Dated : 05.11.2020
* Sample ID	:	Wet Mix Macadam
Test Method as per	:	IS - 2386(Part 1) : 1963 (RA 2016)
Date of Testing	:	13.11.2020
Report Issue Date	:	13.11.2020

Sl.No.	Description	Result
1	Flakiness Index	11.25%
2	Elongation Index	13.60%
3	Combined Flakiness & Elongation Index	24.85%

*Information is furnished by the Customer/Representative.

Comments:

→ Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 35%

Note:

⇒The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒Any Query regarding the report must be reported within 30 days from the date of testing.

****

M/s. Civil-Tech Consultants & Engi

Authorised Signatory

ಸ. ಕಾ. ಪಾ. ಅ.
ಬಾಗಲಗುಂಟೆ

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagara, Bangalore-79.
Tele fax : 23223227, Cell : 93428 39190, Website : www.civiltechconsultants.com

Scanned by CamScanner

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory
An ISO 9001:2015 Certified Company
NABL - Accredited Laboratory as per ISO / IEC-17025 : 2017

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/CR/W.No.14/BM/Agg.G/2020-21

25.11.2020

TEST REPORT ON GRADATION OF AGGREGATES

* Customer	:	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Sri. C.Rajanna,** Kannasawadi Village, Madhure (H), Doddaballapura (T), Bangalore - 562103.
* Name of work	:	Improvements and Asphalting to road at Ramaiah and Soundarya Layout surrounding in Bagalagunte Ward No.14, BBMP, Bangalore.
* Reference	:	EE/DD/W.O/127/2020-21 Dated : 05.11.2020
* Sample ID	:	Hot Mix Plant, Bangalore
Test Method as per	:	IS - 2386(Part -1) : 1963 (RA-2016)
* Type of Mix	:	Bituminous Macadam
Date of Testing	:	25.11.2020
Report Issue Date	:	25.11.2020

Total Weight of Sample: **5200** gm

Sieve Size, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
26.5	0	0	0	100	100	Gradation satisfies Grade-II MORTH Table 500-7 specification
19	385	7.40	7.40	92.60	90-100	
13.2	1650	31.73	39.13	60.87	56-88	
4.75	1660	31.92	71.06	28.94	16-36	
2.36	1035	19.90	90.96	9.04	4-19	
0.3	280	5.38	96.35	3.65	2-10	
0.075	110	2.12	98.46	1.54	0-8	

Total Weight of Sample: **5300** gm

Sieve Size, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
26.5	0	0	0	100	100	Gradation satisfies Grade-II MORTH Table 500-7 specification
19	430	8.11	8.11	91.89	90-100	
13.2	1590	30.00	38.11	61.89	56-88	
4.75	1730	32.64	70.75	29.25	16-36	
2.36	920	17.36	88.11	11.89	4-19	
0.3	400	7.55	95.66	4.34	2-10	
0.075	95	1.79	97.45	2.55	0-8	

* Information is furnished by the Customer/Representative

Note:

⇒The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒Any Query regarding the report must be reported within 30 days from the date of testing.

M/s. Civil-Tech Consultants & Enginee

Authorised Signatory

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagara, Bangalore-79.
Tele fax : 23223227, Cell : 93428 39190, Website : www.civiltechconsultants.com
e-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

Scanned by CamScanner

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory
An ISO 9001:2015 Certified Company
NABL - Accredited Laboratory as per ISO / IEC-17025 : 2017

Job No.: CTCE/BBMP/CR/W.No.14/BC/Agg/202-21

TEST REPORT ON GRADATION OF AGGREGATE

26.11.2020

* Customer	:	Asst. Executive Engineer, T.Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	Sri. C.Rajanna, Kannasawadi Village, Madhure (H), Doddaballapura (T), Bangalore - 562103.
* Name of Work	:	Improvements and Asphalting to road at Ramaiah and Soundarya Layout surrounding in Bagalagunte Ward No.14, BBMP, Bangalore.
* Reference	:	EE/DD/W.O/127/2020-21 Dated : 05.11.2020
* Sample ID	:	Bituminous Concrete
Test Method as per	:	IS - 2386(Part -1) : 1963 (RA-2016)
* Type of Mix	:	Hot mix plant, Bangalore
Date of Testing	:	26.11.2020
Report Issue Date	:	26.11.2020

Total Weight of Sample: **5100** gm

Sieve Size, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	JOBMIX Gradation as per MORTH	Remarks
19	0	0	0	100	100	Gradation satisfies Bituminous concrete Grade-II specification as per `MORTH 500-17
13.2	365	7.16	7.16	92.84	90 - 100	
9.5	520	10.20	17.35	82.65	70 - 88	
4.75	785	15.39	32.75	67.25	53 - 71	
2.36	635	12.45	45.20	54.80	42 - 58	
1.18	585	11.47	56.67	43.33	34 - 48	
0.600	590	11.57	68.24	31.76	26 - 38	
0.300	580	11.37	79.61	20.39	18 - 28	
0.150	325	6.37	85.98	14.02	12 - 20	
0.075	365	7.16	93.14	6.86	4 - 10	

Total Weight of Sample: **5200** gm

Sieve Size, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	JOBMIX Gradation as per MORTH	Remarks
19	0	0	0	100	100	Gradation satisfies Bituminous concrete Grade-II specification as per MORTH 500-17
13.2	400	7.69	7.69	92.31	90 - 100	
9.5	530	10.19	17.88	82.12	70 - 88	
4.75	600	11.54	29.42	70.58	53 - 71	
2.36	750	14.42	43.85	56.15	42 - 58	
1.18	695	13.37	57.21	42.79	34 - 48	
0.600	590	11.35	68.56	31.44	26 - 38	
0.300	600	11.54	80.10	19.90	18 - 28	
0.150	300	5.77	85.87	14.13	12 - 20	
0.075	435	8.37	94.23	5.77	4 - 10	

*Information is furnished by the Customer/Representative.

Note:

⇒The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು

M/s. Civil-Tech Consultants & Engineers

Authorised Signatory

****

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagara, Bangalore-79.
Tele fax : 23223227, Cell : 93428 39190, Website : www.civiltechconsultants.com
e-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

Scanned by CamScanner

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory
An ISO 9001:2015 Certified Company
NABL - Accredited Laboratory as per ISO / IEC-17025 : 2017

Job No.: CTCE/BBMP/CR/W.No.14/BC/Stability/2020-21

26.11.2020

TEST REPORT ON MARSHALL STABILITY OF MIX

*** Customer**	:	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Sri. C.Rajanna,** Kannasawadi Village, Madhure (H), Doddaballapura (T), Bangalore - 562103.
***Name of the Work**	:	Improvements and Asphalting to road at Ramaiah and Soundarya Layout surrounding in Bagalagunte Ward No.14, BBMP, Bangalore.
***Reference**	:	EE/DD/W.O/127/2020-21 Dated : 05.11.2020
*** Source**	:	Hot mix Plant, Bangalore
*** Type of Mix**	:	Bituminous Concrete
Date of Testing	:	26.11.2020
Report Issue Date	:	26.11.2020

The results of the tests conducted on the Bituminous Concrete mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-11)
1	Marshall Stability (Kn at 60°C)	9.90	10.25	9 Kn (min)
2	Marshall flow (mm)	2.80	3.65	2 – 4
3	Voids in Compacted Mix %	3.95	4.25	3 – 5
4	Percent voids in Mineral Aggregate (VMA)	13.15	14.05	Min 12
5	Percent Voids filled with Bitumen (VFB)	68.90	69.20	65 - 75
6	Density, g/cc	2.28	2.29	--

*Information is furnished by the Customer/Representative.

Civil-Tech Consultants & Engineers * Bangalore *

Note:

⇒ The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

****

M/s. Civil-Tech Consultants & Engine

Authorised Signatory

ಸ. ಪಾ. ಪಾ. ಅ.
ಬಾಗಲಗುಂಟೆ

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagara, Bangalore-79.
Tele fax : 23223227, Cell : 93428 39190, Website : www.civiltechconsultants.com
e-mail : vishwanath.ia@civiltechconsultants.com | info@civiltechconsultants.com

Scanned by CamScanner